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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,743	06/30/2003	Douglas E. Fain	S-92,821	2559
48589	7590 05/26/2005		EXAM	INER
ROBERT POTEAT, P.C.			FULLER, ERIC B	
1092 W. OUTER DRIVE OAK RIDGE, TN 37830			ART UNIT	PAPER NUMBER
·			1762	
			DATE MAILED: 05/26/2003	5

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)	
	10/611,743	FAIN ET AL.	
Office Action Summary	Examiner	Art Unit	
	Eric B. Fuller	1762	
The MAILING DATE of this communication aperiod for Reply	opears on the cover sheet w	vith the correspondence a	address
A SHORTENED STATUTORY PERIOD FOR REP THE MAILING DATE OF THIS COMMUNICATION - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a re - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the maili earned patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, may a ply within the statutory minimum of this d will apply and will expire SIX (6) MOIte, cause the application to become A	reply be timely filed irty (30) days will be considered tin NTHS from the mailing date of this BANDONED (35 U.S.C. § 133).	
tatus			
1) Responsive to communication(s) filed on 17	February 2005.		
	is action is non-final.		
3) Since this application is in condition for allow	ance except for formal mat	tters, prosecution as to t	he merits is
closed in accordance with the practice under	Ex parte Quayle, 1935 C.I	D. 11, 453 O.G. 213.	
isposition of Claims			•
4) Claim(s) 2-24 is/are pending in the applicatio	n.		
4a) Of the above claim(s) is/are withdra			
5) Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>2-24</u> is/are rejected.			
7) Claim(s) is/are objected to.		•	
8) Claim(s) are subject to restriction and/	or election requirement.		
pplication Papers			
9) The specification is objected to by the Examir	ner.		
10)☐ The drawing(s) filed on is/are: a)☐ ac	ccepted or b) objected to	by the Examiner.	
Applicant may not request that any objection to the	e drawing(s) be held in abeya	ance. See 37 CFR 1.85(a).	
Replacement drawing sheet(s) including the сопе	,	•	` '
11) The oath or declaration is objected to by the E	Examiner. Note the attache	ed Office Action or form I	PTO-152.
riority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreig	n priority under 35 U.S.C.	§ 119(a)-(d) or (f).	
a) ☐ All b) ☐ Some * c) ☐ None of:			
1. Certified copies of the priority documer			
2. Certified copies of the priority documer			1.04
3. Copies of the certified copies of the pri	-	n received in this Nation	ai Stage
application from the International Bure. * See the attached detailed Office action for a list		t raceived	
See the attached detailed Office action for a lis		t received.	
ttachment(s)			·
Notice of References Cited (PTO-892)		Summary (PTO-413)	•
Notice of Draftsperson's Patent Drawing Review (PTO-948)		(s)/Mail Date Informal Patent Application (P	TO 450)
Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08	n 511 I Matica of		1()_152)

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DETAILED ACTION

Response to Arguments

Applicant has added the limitation of the membrane being a ceramic membrane and argues that the zeolite membrane of Funke et al. has different pore structures than the oxide, nitride, and/or carbide ceramic membranes of present invention. However, these alleged differences are not claimed. Applicant further alleges that these differences would translate into fundamental different approaches to solving the problem. This argument is not found convincing. Funke explicitly teaches that the zeolite is alumina silicate (column 1, line 58). This reads on being a ceramic membrane, which is all that the claims require. The approach the applicant uses in solving the problem of reducing pore size does not carry patentable weight when Funke anticipates each and every limitation of the claim. Because the arguments have not been found convincing, the examiner maintains the rejections based on Funke.

Applicant has further amended the claims such that the limitations of claim 1 have been incorporated into claim 4. This has been sufficient in overcoming the rejections based on Levy et al. or McMillian et al. as primary references, as these references were not used in the rejection of claim 4. These rejections have been withdrawn accordingly. The rejections based on Funke that are still applicable are shown below.

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-10, 16, 17, and 22-24 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Funke et al. (US 6,051,517).

The claimed process is disclosed at col. 4, lines 20-50, col. 4, lines 60-68, col. 7, lines 10-15, 25-30, and 60-65, col. 8, lines 30-45, col. 9, lines 1-3 and 35-50, col. 10, lines 21-55 and col. 11, lines 34-38. It is noted that the pore sizes disclosed in the examples after deposition of the layers are in the claimed ranges.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funke et al. (US 6,051,517).

Funke teaches the limitations of claim 4, as shown above, but does not explicitly disclose coating only one side of the membrane, such as by placing the membrane on a holder. However, because the purpose of the membranes disclosed in the above references is to filter material, which involves passing a medium through the membrane to allow some material to pass through based on the adjusted pore size and such passing through is only usually performed from a single direction through the filter to

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avoid dislodging trapped material filtered out by the membrane, it would have been obvious to coat only the inflow-side of the filter to adjust the pore size thereof because that is the side at which filtration is performed and coating only one side would have the clear advantages of saving process time and cost by coating only one side as opposed to both sides.

Claims 11-13 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Funke et al. (US 6,051,517) in view of Levy et al. (US 5,789,024).

Funke teaches the limitations to claim 9, as shown above, but does not explicitly disclose a gamma alumina or alumina membrane. However, because Levy discloses that it is desirable to decrease the pore size of alumina membranes by depositing inorganic compounds thereon (col. 7, line 23), it would have been obvious to have coated an alumina membrane by the process of Funke with a reasonable expectation that doing so would successfully provide an alumina membrane having an adjusted pore size to tailor its filtration properties.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks, can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER